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Abstract of the national paper of Italy

1. Italy's National Space Plan provides the basis for the scientific, technological and commercial applications of space activities. It coordinates, supports and directs Italian space activities and promotes the technological capabilities of Italian aerospace activities. The plan spans a five-year period and is updated annually. At present, the period covered is from 1998 to 2002.

2. Italy is a founding member of the European Space Agency (ESA) and through its participation in ESA programmes it contributes 15 per cent of the total budget of the Agency.

3. Italy is concerned with many issues addressed by the Third United Nations Conference on the Exploration and Peaceful Uses of Outer Space (UNISPACE III) in the context of the peaceful uses of outer space.

4. Remote sensing satellites are strategic in the protection of Earth and its environment. With this in mind, Italy participates in the Committee on Earth Observation Satellites (CEOS) and is actively involved in achieving the goals it sets. The Italian Space Agency (ASI) is part of the X-SAR programme with the German Space Agency (DARA) and the National Aeronautics and Space Administration (NASA) of the United States of America and the ESA Earth observation programme (ERS-2, Envisat 1 and Meteosat). The ASI Geodesy Space Centre in Matera plays an important international role in the receiving, processing and archiving of data, in particular in the Mediterranean basin, with its ERS-1 and ERS-2 satellites.

5. A new and most important ASI Earth observation programme is the Skymed Cosmo satellite constellation, a space-based disaster management system crucial for the detection of natural disasters and providing early warning. Other applications include civil protection, environmental monitoring, disaster monitoring, agricultural monitoring, cartography and mapping, urban monitoring, coastal monitoring and hydrological resources.

6. Satellite navigation and location systems have improved the efficiency of transport search and rescue, geodesy and other related activities and will become an integral part of future European infrastructure. Italy places high priority on navigation initiatives, in particular, the Galileo programme.

7. The most important commercial application of space is space telecommunications. Satellite-delivered multimedia services are of capital importance and Italy is working strongly in this direction with EuroSkyWay, a broadband network using Ka-band geostationary orbit

satellites to be integrated with a global network provider. Another application of space is in the realm of telemedicine. The SHARED network is an innovative mode of health care delivery that operates in remote and underserved areas.

8. National science programmes have added an important body of knowledge to space science. Scientific satellites have made internationally renowned discoveries that have enhanced the world's conception of the universe. For example, BeppoSAX has allowed scientists to view the visible light counterpart of gamma-ray bursts. Missions to Mars, Saturn and Titan (Cassini) in collaboration with NASA are part of science's exploration of outer space. Italian participation in ESA programmes is making significant contributions by means of the development of innovative scientific instrumentation. Research in microgravity in space debris is also being conducted with the objective of furthering mankind's knowledge.

9. Spin-off benefits and technology transfer are, of course, important aspects of space exploration. Italy is developing technological initiatives in the fields of electrical propulsion, materials, components, millimetric waves, optoelectronic sensors and photovoltaic cells. It is also actively promoting the development of a small launch vehicle in collaboration with ESA.

10. MITA and PRIMA represent an example of the ASI small satellite programme. Together they will provide low-risk and affordable access to space with the possibility of verifying and evaluating new technologies.

11. Education and training in space science technology represent an area to which Italy attributes the greatest importance. ASI plans to offer short intensive courses at the post-graduate level, fellowships and study programmes in secondary schools. In addition, it is active in the European International Space Year and the International Space University and has established a national point of contact for space law. An educational satellite mission is also in preparation.

12. Finally, the National Space Plan strongly promotes international bilateral and multilateral cooperation through the use and study of outer space for peaceful purposes. Italy is a member of ESA, the Committee on the Peaceful Uses of Outer Space, other international space organizations (the International Telecommunications Satellite Organization, the European Organization for the Exploitation of Meteorological Satellites, the International Mobile Satellite Organization and the International Telecommunication Union) and institutions involved in space (CEOS, the International Astronautical Federation, the International Academy of Astronautics, the Committee on Space Research, the International Civil Aviation Organization, the European International Space Year, the International Institute of Space Law, the European Centre for Space Law and others). The country is also an active participant in the International Space Station, an outstanding example of space cooperation. It is involved in the construction of the multi-purpose pressurized logistics models, Nodes 2 and 3, and the manned space programme. The International Space Station represents a true challenge for scientists of the space world.